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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eddie M. Schwalb

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06/28/2006

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EXAMINER

PRICE, NATHAN E

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/924,136

Applicant(s)

SCHWALB, EDDIE M.

Examiner

Nathan Price

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-14, 16 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14, 16 and 20-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 and 18 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
WILLIAM THOMSON  
SUPERVISORY PATENT EXAMINER

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is in response to communications received on 18 April 2006. Claims 8 – 14, 16, and 20 – 29 are pending. Claims 1 – 7, 15 and 17 – 19 have been cancelled. Claims 8, 10 – 12, 14, 16, 20 and 21 have been amended. Claims 22 – 29 are new.

#### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1 - 29 have been considered and are either persuasive or moot in view of the new ground(s) of rejection.

#### ***Drawings***

3. The substitute drawings for Figures 1, 2, 7 and 9 were received on 18 April 2006. See Notice of Draftsperson's Patent Drawing Review (PTO-948).

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitations "each virtual channel" and

"each event information table" in lines 7 and 8. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 – 10, 12, 13 and 23 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wugofski (Wugofski, Ted. "A Modular Hypertext Markup Language for Broadcast Applications," 1 October 1998, Draft #4, Over the Moon Productions / Gateway, <<http://xml.coverpages.org/bhtml-4.html>>.) in view of A90 (Advanced Television Systems Committee, "ATSC Data Broadcast Standard," Doc A/90, 26 July 2000.) and Dolan (Dolan, Michael A. "Report on Television Data Applications," NIST GCR 01-818, 1 July 2001.). All three references were cited in the last Office Action.

As to claim 8, Wugofski discloses a method of providing access to one or more services within a Digital TV Application Software Environment (DASE), the method comprising:

receiving a transport stream having content and one or more applications,  
wherein the one or more applications provide the one or more services within the

Digital TV Application Software Environment (DASE) (section 1.1; section 4.13  
“xHTML’s multimedia features...”; section 6.2 “Linking in response to an event”);

using a renderer to interpret and prepare the content for rendering on a  
display device (sections 4.5 and 4.13.1);

mapping at least one document (XHTML addressed below) to a Document  
Object Model (DOM) structure, the document having at least one atomic element  
defined as a “tag” and the DOM having an atomic element defined as a “node”  
(section 6.2; Appendix E); and

using a declarative application program interface to access data (PSIP  
explained below), wherein the declarative application program interface  
comprises an application program interface module (XHTML explained below) that  
introduces new tags having semantics that enable HTML pages to perform an  
active dynamic discovery of at least one of (i) the content and (ii) the services  
(sections 1.1, 4.2), wherein the application program interface module (XHTML  
explained below) includes a rule structure for:

defining a condition within the node (Appendix E.1, “public Boolean  
hasChildNodes()”);

upon satisfaction of the condition, realizing an action defined by the  
at least one tag, which action is found within the data (section 4.19;  
section 6.2); and

otherwise, realizing an action defined by the node (section 4.19;  
section 6.2).

The “tag” is an inherent feature of XDML. Wugofski fails to specifically disclose access to PSIP data stored within at least one XDML document. However, Dolan states that the ATSC is working on a standard for a DASE system (page 30 ¶ 2) and will use XDML (XHTML 1.0 Traditional and Frameset subsets) (page 30 list of web technology used). It would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to combine these references because both describe designs of DASE systems. Also, XDML builds on XHTML (Dolan, page 30 first item in list) and Wugofski uses XHTML in his disclosure.

Wugofski also fails to specifically disclose accessing PSIP data. However, A90 discloses that the PSIP standard is used to describe system information and program data (section 11.1). In order for the PSIP to serve this purpose (providing program guide data), there must be an ability to access the data stored in the PSIP. It would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to combine these references because both address designs for digital television. Also, Wugofski describes events in which a channel is selected (appendix G.3, “onchannelselect”) and also recognizes that PSIP can be used with the disclosed technology (appendix G.3, “oneventstart”).

As to claim 9, Wugofski, as modified by Dolan, discloses the step of rendering the XDML document based on the realized action (sections 4.2 and 11.5).

As to claim 10, Wugofski fails to disclose a master guide table. However, A90 discloses that the mapping step comprises identifying all tables via a master guide table (Fig. 11.1; page 47 ¶ 5). See the rejection of claim 8 for motivation to combine.

As to claim 12, Wugofski also discloses the step of rendering the realized action for display on the display device (section 4.19).

As to claim 13, Wugofski also discloses the step of automatically and dynamically updating all referenced actions (section 4.13.2).

As to claim 23, Wugofski also discloses that the services comprise at least one of: weather reports, interactive advertising and an interactive TV show (sections 3.1, 7.1 and 8.6).

As to claims 24 and 25, see the rejection of claim 8.

As to claim 26 – 29, see the rejection of claim 9, 12, 13 and 23.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wugofski in view of A90 and Dolan as applied to claim 10 above, and further in view of Burkett et al. (US 6,635,089 B1; hereinafter Burkett). Burkett was cited in the last Office Action.

As to claim 11, although Wugofski discloses tables, the reference does not specifically disclose the tables or the details of the DOM limitations as claimed.

However, Burkett discloses the steps of:

- defining an object class for each table (type of structured information)
- identified (col. 7 lines 26 – 34; col. 8 lines 8 – 21; table further explained below);
- parsing each table (col. 8 lines 55 – 57);
- for each parsed table, constructing an object instance (col. 2 lines 44 – 55; col. 8 lines 8 – 21);

generating a DOM root document object (col. 8 lines 43 – 57); and  
adding child nodes of the DOM root document object (col. 8 lines 43 – 57).

Implementing the disclosure of Burkett using object-oriented programming (col. 7 lines 28 – 32) implies defining object classes. Burkett fail to specify that the objects being parsed are tables from a PSIP and therefore also fail to specify the types of objects that make up the parent and child nodes and the ID. Burkett does state that objects other than those in their disclosure can be used (col. 8 lines 15 – 17), which can include other types of structured information (col. 8 lines 8 – 10), such as the tables from a PSIP. A90 discloses the hierarchy of the tables in a PSIP and identifying event information tables based on the source ID (Fig. 11.1). It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because the parsing and tree generation disclosed by Burkett would be an appropriate way to implement a system that includes structured information, such as that shown in Figure 11.1 of A90, in order to preserve the hierarchy (Burkett: col. 2 lines 44 – 55).

7. Claims 14, 16 and 20 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wugofski in view of A90, Dolan and Eyer et al. (US 5,982,445; hereinafter Eyer). Eyer was cited in the last Office Action.

As to claim 14, Wugofski discloses a system that receives DASE-compliant broadcast streams containing video, audio, or data components, or any combination



thereof, and renders the component(s) in a manner useful to an end user (section 1.1), the system comprising:

A declarative application program interface configured to access the data, wherein the declarative application program interface comprises an application program interface module that introduces new tags having semantics that enable HTML pages to perform an active dynamic discovery of at least one of (i) content and (ii) service of a transport stream, wherein a render is configured to interpret and prepare the content of the transport stream for rendering on an output device (sections 1.1, 4.2, 4.19).

Wugofski fails to specifically disclose a plurality of smart cards, a PSIP database and XDML. See the rejection of claim 8 for explanation of PSIP and XDML, including motivation to combine. Furthermore, Eyer discloses the use of smart cards in a television environment to store data (col. 9 lines 14 – 30). Eyer also discloses that the memory can include a service map and that the smart card can store the html/http code. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine Eyer and Wugofski because both disclose television environments that use markup languages to provide content and services. Since Eyer discloses the use of a channel map, it would have been obvious to also store information about the cards that store code to which other pages can link (Eyer col. 9 lines 25 – 30).

As to claim 16, Wugofski, as modified by A90 and Dolan, also discloses means for mapping XDML declarative applications to a Document Object Model (DOM), which

is used to enable JavaScript access to the PSIP database (sections 6.1 and 6.2). See the rejections of claims 8 and 14 for further information regarding PSIP and XDML.

As to claim 20, Wugofski also discloses that the new tags include associated unique identification values to access content (section 4.2 "href" attribute).

As to claim 21, Wugofski discloses that the content can be generated based on user-inputs (section 4.2 "Visiting a linked resource").

As to claim 22, Wugofski also discloses that the services comprise at least one of: weather reports, interactive advertising and an interactive TV show (sections 3.1, 7.1 and 8.6).

### ***Conclusion***

8. The prior art made of record on the P.T.O. 892 that has not been relied upon is considered pertinent to applicant's disclosure. Careful consideration of the cited art is required prior to responding to this Office Action, see 37 C.F.R. 1.111(c).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not


mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 7:30am - 4:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NP

  
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SUPERVISORY PATENT EXAMINER